

### **THE OFFICE ACTION**

In the office action issued on June 20, 2003, the Examiner rejected claims 1-5, 13-18, 22, 24-27, 35-39, and 42-44 based on several cited art references. The Examiner indicated that claim 23 is allowed, and that claims 6-12, 19-21, 28-34, 40, 41, 49 and 50 are objected to as being dependent from a rejected base claim. The Examiner rejected claims 1-5, 13-18, 22, 24-27, 35-39, 43, and 44 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,279,726 to Baird et al. ("Baird '726") in view of U.S. Patent No. 4,675,092 to Baird et al. ("Baird '092") and U.S. Patent No. 4,389,295 to Davey et al. ("Davey"). The Examiner further rejected claim 42 under 35 U.S.C. §103(a) as being unpatentable over Baird '092 in view of Davey and further in view of U.S. Patent No. 5,747,929 to Kato et al. ("Kato"). The Examiner objected to claims 49 and 50 based on a clerical error in claim 49.

### **REMARKS**

Applicant has carefully reviewed the office action. The Applicant acknowledges and thanks the Examiner for indicating the allowance of claim 23 and the allowability of claims 6-9, 10-12, 19-21, 28-31, 32-34, 40 and 41 if rewritten in independent form. Applicant respectfully requests reconsideration of the application based on the above amendments and the following comments. Claims 1-44, 49, and 50 remain pending in the application.

#### **I. Claim Objections**

Claim 49 has been amended to correct a clerical error as indicated by the Examiner. Withdrawal of the objection to claims 49 and 50 is respectfully requested.

#### **II. Claim Rejections - 35 U.S.C. 103**

Claims 1-5, 13-18, 22, 24-27, 35-39, 43 and 44 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Baird '726 in view of Baird '092 and Davey. The Applicant submits that the amended claims 1 and 24, and claims dependent therefrom, are patentably distinct from the cited art.

First, there is no motivation to combine the references. To properly combine references under §103, there must be some suggestion to combine the prior art references and a reasonable expectation of success. *Brown & Williamson Tobacco*

*Corp. v. Philip Morris Inc.*, 56 USPQ2d 1456 (Fed. Cir. 2000). In making this determination, "the claimed invention must be considered as a whole, multiple cited prior art references must suggest the desirability of being combined, and the references must be viewed without the benefit of hindsight afforded by the disclosure." *In re Paulsen*, 31 USPQ2d 1671 (Fed. Cir. 1994). Even assuming that all of the limitations of the present claims can be found by culling from the prior art parameters to fit the claimed invention, it is improper to pick and choose individual elements from assorted prior art references to recreate the claimed invention without some motivation to do so. *Symbol Technologies, Inc. v. Opticon, Inc.*, 19 USPQ2d 1241 (Fed. Cir. 1991). The mere fact that a modification could be performed does not render a claim obvious unless the prior art also suggested the desirability of such a modification. *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984). In the present case, none of the cited patents teach any such desirability to be combined. There is simply no motivation in these prior art references to combine their teachings. Absent this motivation, the Examiner's piecing together of teachings from completely disparate references is improper.

The '726 patent is directed a method for making electroluminescent films by sputtering. A ZnS, manganese and copper targets are used. The manganese and copper targets are the dopants. The resultant film is a doped ZnS phosphor film. The Examiner advises that the differences between the '726 patent and the claimed invention is that the '726 patent does not teach controlling the power ratio, having a sulfur bearing compound incorporating the activator, and utilizing a sulfur containing atmosphere and discussing pressures. It is asserted that the '726 patent also does not teach or suggest the recited element of doping the first metal source or second sulfur bearing source nor deposition of a ternary or higher phosphor composition that incorporates a rare earth activator. The '726 patent does not teach or suggest any desirability to dope the metal or sulfur bearing compound target nor the desirability of being able to deposit a multi-element thin film phosphor by the method taught therein.

The '092 patent teaches sputtering a target of elemental zinc in a hydrogen sulfide and argon atmosphere. Manganese as an activator may be incorporated into the zinc source or cosputtered separately. However, this patent not teach or suggest does not teach or suggest any desirability to provide a sulfur bearing compound as a second source or doping such a source with an activator. This patent also does not

teach any desirability of being able to deposit a multi-element thin film phosphor by the method taught therein.

The '295 patent teaches the sputtering of a ZnS target with manganese as a separate activator in a hydrogen sulfide atmosphere. However, this patent does not teach the use of a sulfur bearing compound as a source that can be doped with a rare earth activator and sputtered along with a metallic source to deposit a multi-element phosphor film.

The Examiner is incorrect that it would have been obvious to have modified the teachings of the '726 by using an activator in a single target as taught in the '092 patent within a hydrogen sulfide atmosphere. This is because none of these references teach or suggest any such desirability to do so and further do not teach any method that is able to deposit a multi-element phosphor film. The phosphors of the prior art are doped zinc sulfide phosphor films. The Examiner cannot simply pull each recited element out of each cited reference to come up with the claimed invention. This is unallowable hindsight. Even so, such combination would not lead to the invention presently claimed. The references themselves must suggest that which is claimed. This is not the case and therefore it is requested that the Examiner withdraw the rejections.

Second, even if the references could somehow be combined, they would still not disclose or suggest all of the elements of the present claims. In this respect, claims 1 and 24 (from which the remainder of the rejected claims depend) have been amended to clarify that the method is used for the deposition of a multi-element phosphor composition which is a ternary or higher composition. Support for this amendment may be found throughout the specification, specifically for example on page 3, line 20 and lines 31-34 as well as Example 1. None of Baird '726, Baird '092, or Davey teach or suggest a method that can deposit such a multi-element phosphor composition. Rather these patents are directed to the deposition of zinc sulfide doped with a dopant such as magnesium or copper. As such, these are not multi-element thin film phosphor compositions as described in the present application.

With regard to the rejection of claim 42 under 35 U.S.C. 103(a) being unpatentable over Baird '092 in view of Davey and further in view of Kato, the Applicant asserts that this reference simply discloses heat treatment of a phosphor film. The motivation to provide light emission is not the same motivation required to

provide such treatment to the phosphor deposited by the method of claim 24. This reference is silent with respect to the recited elements of claim 24 from which this claim depends. As such, this reference cannot render the claim obvious.

### III. Allowable Subject Matter

The Examiner is thanked for indicating claim 23 is allowed. The Examiner had also indicated that claims 6-9, 10-12, 19-21, 28-31, 32-34, 40 and 41 are allowable if rewritten in independent form. It is asserted that the amendments made to claim 1 and 24 as well as the patentability remarks made therefor overcome the Examiner's rejections and therefore no such amendment is required.

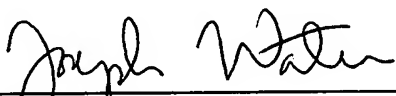
### CONCLUSION

In view of the above, Applicants submit the present application is in condition for allowance and respectfully request the rejections be withdrawn.

If any fee is due in conjunction with the filing of this response, Applicants authorize deduction of that fee from Deposit Account No. 06-0308.

Respectfully Submitted,  
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